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RESEMBLANCE OF THE ORBIT OF BROOKS'S COMET (1898 *i*) TO  
THAT OF SCHAEBERLE'S COMET OF 1881 (1881 IV).

There is a striking similarity between the orbits of these two comets, as will be seen from the following comparison of their elements:—

	$\omega$	$\Omega$	$i$	$q$
SCHAEBERLE,	122° 8'	97° 17'	140° 14'	0.6335
BROOKS,	123 22	96 10	140 19	0.7564

The elements of SCHAEBERLE'S Comet are the definitive elements by STECHERT brought forward to 1898.0; those of BROOKS'S Comet are by HUSSEY from two-day intervals. SCHAEBERLE'S Comet was observed for three months; and the resulting orbit shows that it is not possible for BROOKS'S Comet to be a return of SCHAEBERLE'S. The resemblance is so close, however, as to indicate a strong family connection, and the necessity for as good a series of observations of the present comet as possible.

C. D. PERRINE.

October 26, 1898.

ASTRONOMICAL TELEGRAMS.

(*Translations*).

BOSTON, Mass., October 21, 1898.

To Lick Observatory: (Received 9:55 A.M.)

A bright comet was discovered by BROOKS, October 20.500 G. M. T., in R. A. 14<sup>h</sup> 32<sup>m</sup> 2<sup>s</sup>.0; Decl. + 60° 26' 0". The comet is round, and is moving southeast.

(Signed) JOHN RITCHIE, JR.

Lick Observatory, October 22, 1898.

To Harvard College Observatory: (Sent 10:30 A.M.)

Comet BROOKS was observed by W. J. HUSSEY, October 21.6352, in R. A. 15<sup>h</sup> 3<sup>m</sup> 35<sup>s</sup>.6; Decl. + 57° 55' 18".

Lick Observatory, October 24, 1898.

To Harvard College Observatory: (Sent 10:10 A.M.)

Comet BROOKS was observed by W. J. HUSSEY, October 23.6280 G. M. T., in R. A. 15<sup>h</sup> 42<sup>m</sup> 57<sup>s</sup>.1; Decl. + 52° 49' 22".

Lick Observatory, October 25, 1898.

To Harvard College Observatory: (Sent 11:00 A.M.)

Comet BROOKS was observed by W. J. HUSSEY, October 24.6850 G. M. T., in R. A. 16<sup>h</sup> 0<sup>m</sup> 6<sup>s</sup>.1; Decl. + 49° 50' 19".

Lick Observatory, October 26, 1898.

To Harvard College Observatory: (Sent 10:20 A.M.)

Elements and ephemeris of Comet BROOKS were computed by  
W. J. HUSSEY, as follows:—

$T = 1898$ , November 23.14 G. M. T.

$\omega = 123^{\circ} 22'$	} Mean Equinox of 1898.0
$\Omega = 96 \quad 10$	
$i = 140 \quad 19$	

natural  $q = 0.7564$

[The ephemeris is here omitted.]

Lick Observatory, October 26, 1898.

To Harvard College Observatory: (Sent 12:20 P.M.)

PERRINE finds close resemblance between the elements of  
BROOKS's Comet and those of SCHAEBERLE's Comet 1881 IV.

#### A NEW GAS.

In a paper read before the American Association for the Advancement of Science, August 23, 1898, Professor CHARLES F. BRUSH, recounts his experiments on the heat-conductivity of various gases at low pressures. His purpose is "to announce the discovery of a new gas, presumably elementary, and possessed of some extraordinary properties." In his account he says:\* "I had long been engaged in high-vacua experiments, and had observed that glass apparatus, when highly exhausted and heated, evolved gas for an indefinite length of time, rapidly at first, then slower, but never stopping until the temperature was reduced. On cooling, rapid reabsorption took place, but was never complete, indicating that two or more gases had been evolved by heating, one of which was not reabsorbed by cooling. In other words, the absorption was selective. The truth of this conclusion was abundantly demonstrated subsequently."

Continuing his experiments, Professor BRUSH has been able to demonstrate the existence of a new gas, named by him *etherion*, and to show that its principal property is enormous heat-conducting capacity—at least one hundred times that of hydrogen, and three hundred times that of ordinary air. From his experiments on the relation between the relative heat-conductivity and the relative molecular velocity of gases, the investigator reaches the conclusion that the mean molecular velocity of

\* *Science*, October 14, 1898.